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From the Editor-in-Chief

Ebola Fever and Global Health Responsibilities

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Over the summer and into the fall, the global community grew increasingly alarmed about the outbreak of the Ebola virus in West Africa—and for good reason. By all accounts, the spreading epidemic in Sierra Leone, Guinea, Liberia, and elsewhere constitutes the worst Ebola crisis in recorded history.

One of the ethical wrinkles characterizing this public health emergency began in late August when relief and humanitarian organizations urged the doctors, nurses, and other health professionals working for them to flee "the hot zone" and go home. It is hard, if not impossible, to criticize those wanting to escape from such danger, especially when so few of us are willing to go there in the first place. But it does force every doctor (and patient) to reconsider the medical profession's presumed ethical obligation to treat the ill, no matter what the risk. More broadly, it allows for reflection on how population health measures and sound global health policies, backed by sufficient and overdue financial investments, might help us avoid such ethical dilemmas (and severe epidemic outbreaks) in the future.

Many people may be surprised to learn that across time and societies, physicians have often abandoned their patients during deadly epidemics. For example, in 166 CE, the famed physician and anatomist Galen fled Rome upon the arrival of bubonic plague. In the 17th century, Thomas Sydenham, one of medicine's most astute observers of infectious disease, quit London for the more salubrious countryside during that city's "great plague." These legendary healers were hardly alone. Some European cities were forced to appoint public plague doctors to attend the ill patients that other physicians refused to treat. A wide range of avoidance responses also was seen in colonial Philadelphia during the yellow fever epidemic of 1793 and the several cholera and smallpox epidemics that broke out across the United States during the early 19th century. Still, many other doctors during these eras *did* sacrifice their

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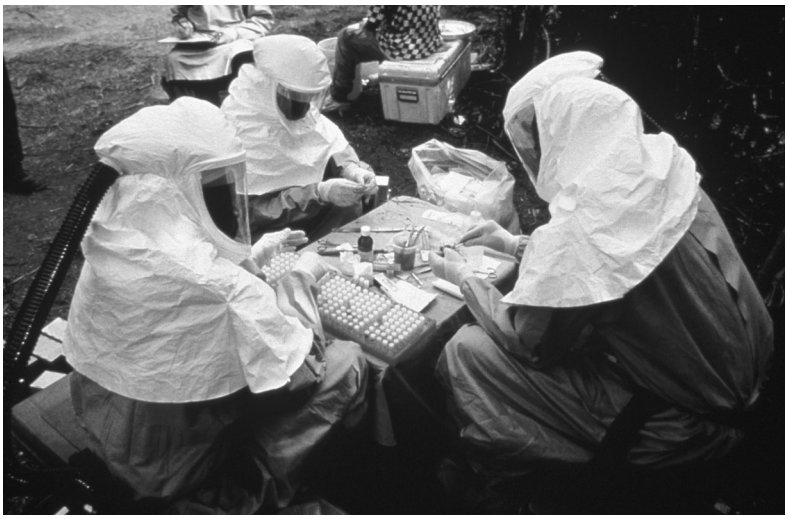
lives to treat infectious patients, albeit for reasons spanning from the religious to the economic.[1]

The American Medical Association's (AMA's) code of medical ethics, adopted in May 1846, was the first professional canon to articulate a physician's duty to treat during epidemics. In a section titled "The Duties of the Profession to the Public," the code dictates, "When pestilence prevails, it is their [physicians'] duty to face the danger and to continue their labors for the alleviation of the suffering even at the jeopardy of their own lives." Some form of this sentence appeared in version after version of the AMA Code of Ethics until 1957.[2(p32)]

So common were the deaths of mid- to late-19th-century doctors and other health professionals in the line of infectious fire that they might fill an interesting book. For example, George Waring Jr, the sanitary engineer and crusading commissioner of street cleaning in New York City during the 1890s, was determined to rid the streets of the filth and raw sewage he believed to be the source of New York's legendary health problems. A devoted anticontagionist, he heatedly denied the then new-fangled theory that pathogenic microbes caused scourges like cholera, tuberculosis, and diphtheria. Ironically, Waring died of yellow fever in 1898. While trying to improve sanitary conditions in the newly acquired Cuba, at the request of President William McKinley at the close of the Spanish-American War, Waring was bitten by a mosquito carrying the virus they called Yellow Jack. Yet if Waring could speak to us today, I am almost certain he would say he was simply doing his duty.[3(p155)]

After World War II, antibiotics became widely available, completely revolutionizing the treatment of many infectious diseases. Between 1946 and the late 1970s, a long parade of effective vaccines, medications, and support measures inspired many physicians to declare, prematurely, the conquest of epidemics. During this brief period, we all grew far too comfortable with the faulty notion that modern medicine was powerful enough to tame any infection. This perceived invulnerability made it especially bad form for a physician to abandon the treatment of an infectious patient.

The contemporary debate over the duty to treat reared an even uglier head in 1982 when health care workers of all stripes expressed great reluctance at exposure to a new, deadly, and not even remotely curable infection: HIV/AIDS. Even after it became clear that HIV was transmitted by sexual activity, blood contact, and childbirth (if the mother was



CDC and Zairian scientists take blood samples near Kikwit, Zaire, during the 1995 Ebola virus outbreak. CDC/Ethleen Lloyd.

HIV positive), too many doctors and other health care workers avoided AIDS patients well into the 1990s. Although AIDS is now in its fourth decade of pandemic malevolence, such fears have, thankfully, quieted. But new fears and familiar avoidance patterns frequently reappear among health professionals (as we are seeing with Ebola) each time a deadly, newly emerging, or reemerging infectious disease strikes.[4]

In the relatively safe environment of conference rooms in our major medical centers and universities, health care professionals, bioethicists, and others are again wringing their hands over this conundrum: How should one care for patients during an epidemic disease that modern medicine has not yet figured out how to effectively treat, especially when the disease in question holds a very real risk of killing both the patient and the health professional?

The current AMA Code of Ethics takes an "on the one hand, but on the other hand" approach to this dilemma. It determines that physicians have an obligation to care for the sick, which "holds even in the face of greater than usual risks to their own safety, health or life." But the same passage also acknowledges that the supply of physicians is not "an unlimited resource" and that doctors need to "balance immediate benefits to individual patients with ability to care for patients in the future."[5]

Striking a balance between medical or humanitarian assistance for developing nations and the hard work needed to develop a healthier future for those living there will take far more than the declaration or elaboration of an ethical code. Indeed, it will take a concerted population health approach, which depends on the world's wealthier nations living up to their collective social responsibility to fund substantial improvements in the health conditions of the world's less healthy nations. President Obama's historic decision, in mid-September, to send medicine, equipment, and 3,000 military personnel to the most seriously Ebola-struck regions of West Africa, along with similar responses from Great Britain and France, is an excellent start but there is much more to be done (at this writing more resources are being developed to fight Ebola overseas). But as President Obama observed on September 16, "this epidemic is going to get worse before it gets better."

Sadly, history teaches us that once the Ebola crisis subsides, we will likely revert to the same practices and conditions that gave rise to this epidemic (and many others) in the first place. The time has come to definitively change this oppressive historical trend by refusing to succumb to the epidemic amnesia of our predecessors.

Long after Ebola is contained, the wealthier nations (and those fortunate enough to live in them) must get to work righting the unacceptable injustice of a continent where health care is inaccessible for too many, where fresh running water is scarce, and where electrification and modern roads are inadequate. Such infrastructural problems make the overwhelming majority of epidemics worse and undermine efforts to fight them. This is precisely what we are seeing in western Africa today. The problem with Africa's health is not just Ebola. It is the lack of adequate health care—not enough hospitals, doctors, nurses, and medical supplies. Correcting these glaring deficits will do far more than attenuate future epidemics and the distracting side issue of protecting those exposed to them. It will significantly improve our planet's health, which is good for everyone, no matter where they live.

In this issue of *The Milbank Quarterly*, we offer several new studies and commentaries meriting our collective attention and action on other fronts in population health and health policy. The issue begins with the observations and analysis of our Op-Ed columnists. They tackle a wide menu of issues, ranging from new legal challenges to the federal health insurance marketplace, the many meanings of the term *population health*, and the health risks of mountaintop coal mining, to restricting dietary

salt as a public health measure, whether or not there is a shortage of physicians looming in our national future, and the ethical allocation of drugs and vaccines in the West African Ebola epidemic.

We lead our Original Contribution section with an important analysis by Jennifer Frost, Adam Sonfield, Mia Zolna, and Lawrence Finer on the US government's annual investment in family planning and women's health, which documents this funding stream's impact on a wide range of health outcomes and its net savings to the government and the American people. They argue that public investment in family planning programs and providers not only helps women and couples avoid unintended pregnancy and abortion, but also helps reduce the incidence of cervical cancer, HIV and other sexually transmitted infections, infertility, and preterm and low birth weight births. Most important to those focused on the bottom line, Frost and colleagues estimate that the investments made in 2010 alone resulted in a net government savings of $13.6 billion, or $7.09 for every public dollar spent. Following this cogent analysis is a commentary by Freya Lund Sonenstein of the Bloomberg School of Public Health at the Johns Hopkins University.

From Great Britain, Jonathan Mathers, Rebecca Taylor, and Jayne Parry offer a case study of the challenges of implementing peer-led interventions in a professionalized health service in the context of the National Health Trainers Service. In 2004, health trainers' services were introduced in England to help individuals adopt healthier lifestyles and, through this, to redress national health inequalities. However, the lack of fit of these services with wider NHS priorities and structures forced local health trainer services to divert from their original policy intentions. Over time, these anticipated "community-focused" services became more "NHS-focused," delivering "downstream" lifestyle interventions. In doing so, individuals' lifestyle choices were abstracted from the wider social determinants of health, and the potential to address inequalities was diminished.

Philip Van der Wees, Maria Nijhuis-van der Sanden, John Ayanian, Nick Black, Gert Westert, and Eric Schneider contribute an international analysis of the means of integrating the use of patient-reported outcomes (PROs) for both clinical practice and performance measurement using the views and expertise of practitioners from the United States, the Netherlands, and Great Britain. In recent years, the PRO has become a standardized method for measuring patients' views of their health status. Van der Wees and colleagues determined that experts in

clinical practice and performance measurement supported the integrated collection of PRO data for use in both clinical care and performance measurement. They also found that the measurement of PROs to support patient-provider decisions and the use of PRO performance measures to evaluate health care providers have developed both separately and in parallel. Accordingly, they suggest that the use of PROs would benefit from a shared vision by health care providers, purchasers of care, and patients regarding the aims and purposes of the various applications, as well as the establishment of trust among stakeholders concerning the prudent use of PRO performance measures.

Dave Chokshi, John Rugge, and Nirav Shah explore and analyze the regulation of ambulatory care services in New York by reviewing the available gray and peer-reviewed literature and legislative documents. The impetus for their study is the rapidly changing landscape of ambulatory care services in the United States following new legislation, payment reform, primary care transformation, and the rise of convenient care options like retail clinics. They report on New York State's redesign of regulatory policy for ambulatory care rooted in the Triple Aim (better health, higher-quality care, lower costs), with a particular emphasis on continuity of care for patients. The key tenets of this regulatory approach include defining and tracking the taxonomy of ambulatory care services as well as ensuring that convenient care options do not erode patients' continuity of care.

Finally, in a comprehensive review of the perioperative surgical home (PSH) in the United States and abroad, Bita Kash, Yichen Zhang, Kayla Cline, Terri Menser, and Thomas Miller describe a series of positive quality and cost outcomes. The PSH complements the patient-centered medical home and defines methods for improving the patient experience and clinical outcomes and for controlling the costs of caring for surgical patients. Moreover, the PSH is a physician-led care delivery model that includes multispecialty care teams and the cost-efficient use of resources at all levels through a patient-centered, continuity of care delivery model with shared decision making. Kash and colleagues conclude that the PSH emphasizes a novel approach they call "prehabilitation of the patient before surgery," intraoperative optimization, and an improved return to function through follow-up and effective transitions to home or post-acute care to reduce complications and readmissions.

We trust that you will find the December issue of *The Milbank Quarterly* to be filled with important ideas, experiences, and evidence

regarding a number of critical issues in population health and health policy. And as the winter holidays approach, we hope for a joyous, safer, and healthier new year for all.

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